HELMHOLTZ INSTITUTE FREIBERG FOR RESOURCE TECHNOLOGY

cimera DSI-NRF Centre of Excellence for Integrated Mineral and Energy Resource Analysis

Extractive Geometallurgy Short Course

June 18th and 19th 2025, 9 am to 5 pm

Helmholtz Institute Freiberg for Resource Technology

Geometallurgy integrates geological, mineralogical, and metallurgical information to optimize mineral processing and metal extraction, improving resource efficiency and reducing environmental impact. It enables better decision-making in mine planning, ensuring economic viability and sustainable resource management. In this course we explore the key principles and techniques used in transforming ores into valuable metals. The course bridges the gap between geology and metallurgy, providing essential knowledge for careers in mineral industries. Gain insights and theoretical expertise to enhance your skillset in resource extraction!
The course is within our Doctoral School 'Exploration for Predictive Geometallury 'X4P' between HIF and DSI-NRF CIMERA, South Africa

The course covers:

Orebody knowledge for geometallurgy – From the geological understanding of ore deposits to ore body knowledge strategy and geometallurgy.
Mineral processing –From comminution for mineral liberation to mineral separation and concentration with an example from battery recycling
Data science and microstructure – Using data science to bring microstructure into mineral processing
Pyrometallurgy – An overview of extractive pyrometallurgy of Manganese ores and ferroalloys produced
Hydrometallurgy – Chemical-based processing: leaching and solution purification and membrane technologies

Workshop lecturers:

- Dr Thomas Riegler, Eramet, France
- Dr. Gaurav Tripathi, Eramet, France
- Prof. Anna Vanderbruggen, Université de Lorraine, France
- Dr. Lucas Pereira, HIF, Germany
- Prof. Ajay Patil, HIF, Germany

Target audience: MSc Students, PhD Candidates, Postdocs and Senior Scientists with mainly geological/mineralogical background, who want to deepen their understanding of mineral and metal extraction. In addition all with different background interested in this topic are welcome!

Place: Helmholtz Institute Freiberg for Resource Technologies, Chemnitzer Str. 40, 09599 Freiberg,

Registration deadline: May 21st, first come first serve (max 35 participants)

Registration: register here, **fee:** 30 Euros, course fee includes coffee/tea during breaks

Contact: contacthif@hzdr.de

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